



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Re application of: Lee

Attorney Docket No.: NOVLP033X1  
/NVLS-000498X1

Application No.: 10/649,351

Examiner: NGUYEN, HA

Filed: August 26, 2003

Group: 2812

Title: METHOD FOR PRODUCING ULTRA-  
THIN TUNGSTEN LAYERS WITH  
IMPROVED STEP COVERAGE

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on October 13, 2005 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: \_\_\_\_\_

Tara Hayden

**INFORMATION DISCLOSURE STATEMENT  
37 CFR §§1.56 AND 1.97(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO Form 1449, copies of which are attached, may be material to examination of the above-identified patent application. Applicants submit these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application, (ii) believed to be filed before the mailing date of a first Office Action on the merits, or (iii) believed to be filed before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 500388 (Order No. NOVLP033X1).

Respectfully submitted,

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Form 1449 (Modified)	Atty Docket No. NOVLP033X1/NVLS-000498X1	Application No.: 10/649,351
<b>Information Disclosure Statement By Applicant</b>	Applicant: Lee et al.	
(Use Several Sheets if Necessary)	Filing Date August 26, 2003	Group 1762

#### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	A1	6,551,929	04.2003	Kori et al.			
	A2	6,099,904	08.2000	Mak et al.			
	A3	5,227,329	07.1993	Kobayashi et al.			
	A4	6,017,818	01.2000	Lu, Jiong-Ping			
	A5	6,355,558	03.2002	Dixit et al.			
	A6	6,001,729	12.1999	Shinriki et al.			
	A7	6,844,258	01.18.05	Fair et al.			
	A8	6,174,812	01/16/01	Hsiung, et al.			
	A9	6,566,250	05/20/03	Tu, et al.			
	A10	6,566,262	05/20/03	Rissman, et al.			
	A11	6,706,625	03/16/04	Sudijono, et al.			
	A12	2004/0044127	03.04.04	Okubo et al.			
	A13	2004/0206267	10.21.04	Sambasivan et al.			

#### Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	C1	U.S. Office Action mailed July 12, 2005, from U.S. Application No. 10/815,560 [Atty Dkt. NOVLP096/NVLS-2902].
	C2	Wongsenakhum et al., "Method of Forming Low-Resistivity Tungsten Interconnects", Novellus Systems, Inc., filed March 31, 2004, Application No. 10/815,560, pages 1-30. [Atty Dkt. NOVLP096/NVLS-2902]
	C3	U.S. Office Action mailed July 17, 2002, from U.S. Application No. 09/975,074 [Atty Dkt. NOVLP033/NVLS-000498].
	C4	Presentation by Inventor James Fair: "Chemical Vapor Deposition of Refractory Metal Silicides," 27 Pages, 1983
	C5	Saito et al., "A Novel Copper Interconnection Technology Using Self Aligned Metal Capping Method," IEEE, 3 Pages, 2001
	C6	U.S. Office Action mailed June 22, 2004, from U.S. Application No. 10/435,010 [Atty Dkt. NOVLP058/NVLS-000730].
	C7	Levy et al., "Deposition of Tungsten Nitride", Novellus Systems, Inc., filed October 20, 2003, Application No. 10/690,492, pages 1-42. [Atty Dkt. NOVLP063/NVLS-000615]
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Atty Docket No. NOVLP033X1/NVLS- 000498X1	Application No.: 10/649,351
	Applicant: Lee et al. Filing Date August 26, 2003	Group 1762

**Other Documents**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	C8	Fair et al., "Selective Refractory Metal and Nitride Capping", Novellus Systems, Inc., filed November 8, 2004, Appln No. 10/984,126, pages 1-22. [NOVLP058D1/NVLS-000732D1]
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.